

CLAIMS

WHAT I CLAIM IS:

1. Liquid filtering apparatus, said apparatus including a chamber, a filtering element in said chamber, and valve means for directing liquid through said filtering element in a first direction for filtering said liquid, said valve means being operable to reverse the direction of liquid flow through said filtering element when excessive resistance to flow through said filtering element occurs.
2. Liquid filtering apparatus according to Claim 1 wherein said valve means may include valves on opposite sides of said filtering element, said valves being adapted to be simultaneously opened and closed to reverse the flow of liquid through said filtering element.
3. Liquid filtering apparatus according to Claim 2 and including a further valve which is opened upon reversing the flow through said filtering element to direct the reverse flow to waste.
4. Liquid filtering apparatus according to Claim 1 wherein said valve means include a movable valve member, said filter element being coupled to said valve member and being adapted to move said valve member to reverse the flow of liquid through said filtering element.
5. Liquid filtering apparatus according to claim 4 wherein said valve means comprises a first fixed duct having spaced apart ports therein on opposite sides of said filtering element, and wherein said movable valve member is movable to control the opening and closing of said ports.
6. Liquid filtering apparatus according to Claim 1 wherein said filtering element comprises a porous membrane.
7. Liquid filtering apparatus according to Claim 6 wherein said filtering element separates said chamber into first and second parts, said valve means controlling the

supply of liquid to said first and second parts of said chamber.

8. Liquid filtering apparatus according to Claim 4 and including means for opposing movement of said valve member to its backwashing position.

9. Liquid filtering apparatus according to claim 8 wherein said opposing means comprises a biased element or elements adapted to cooperate with said valve member upon a predetermined movement thereof.

10. Liquid filtering apparatus according to Claim 8 wherein said opposing means comprises a spring which urges said valve member towards its normal filtering position.

11. Liquid filtering apparatus including a chamber, an inlet to said chamber for liquid to be filtered and an outlet for filtered liquid, and a discharge outlet, a filtering membrane in said chamber and separating said chamber into first and second parts, and first valve means for varying the direction of liquid flow through said chamber and said filtering element, said valve means in a first attitude causing liquid to flow in a first direction through said chamber and said membrane for filtering of said liquid, said valve means in a second attitude causing liquid to flow through said chamber and said membrane in a direction opposite said first direction for backwashing said membrane, said valve means being operable to reverse the direction of liquid flow through said filtering membrane when excessive resistance to flow through said filtering membrane during filtering of said liquid occurs.

12. ~~Liquid~~ ^{A liquid} filtering apparatus according to Claim 11, wherein said valve means is coupled to said filtering membrane and wherein said filtering membrane causes said valve means to move between said first and second attitudes.